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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,795	09/12/2006	Andrei Radulescu	NL 040287	1489

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER
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CLEARY, THOMAS J

ART UNIT	PAPER NUMBER
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2111

MAIL DATE	DELIVERY MODE
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09/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,795	<b>Applicant(s)</b> RADULESCU ET AL.	
	<b>Examiner</b> Thomas J. Cleary	<b>Art Unit</b> 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Requirement for Information***

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.
2. In response to this requirement, please provide the names of any products or services that have incorporated the claimed subject matter.
3. The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.
4. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or

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cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

5. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by the *Æthereal NoC* (“*Æthereal*”) as disclosed in “Concepts and Implementation of the Philips Network-on-Chip” by Dielissen et al. (“Dielissen”) and “Communication Services for Networks on Chip” by Radulescu et al. (“Radulescu”).

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8. In reference to Claim 1, *Æthereal* discloses an integrated circuit, comprising: a plurality of processing modules (M, S) (See Figure 11 Elements A-D of Dielissen and Figure 1 Elements IP of Radulescu), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one communication service identification, an interconnect means (N) for coupling said plurality of processing modules (M, S) and for enabling a connection based communication having a set of connection properties (See Pages 3-4 Sections 2.2.1 and 2.2.2 of Dielissen and Page 288 of Radulescu), at least one network interface (NI) associated to said at least one first of said processing modules for controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N) (See Figures 1, 7, and 11 of Dielissen and Figure 1 Elements NI of Radulescu), and a mapping means (A) for mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification (See Figures 1 and 7 'AXI adapter' and 'DTL adapter' and Pages 3-4 Sections 2.2.1 and 2.2.2 of Dielissen and Page 288 of Radulescu).

9. In reference to Claim 2, *Æthereal* discloses the limitations as applied to Claim 1 above. *Æthereal* further discloses that said mapping means (A) is arranged in said at

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least one network interface (NI) (See Figures 1 and 7 'AXI adapter' and 'DTL adapter' and Pages 3-4 Sections 2.2.1 and 2.2.2 of Dielissen).

10. In reference to Claim 3, *Æthereal* discloses the limitations as applied to Claim 1 above. *Æthereal* further discloses that said communication service identification comprises at least one communication thread, wherein said at least one communication thread is mapped to at least one connection based on a set of connection properties (See Page 288 of Dielissen).

11. In reference to Claim 4, *Æthereal* discloses the limitations as applied to Claim 1 above. *Æthereal* further discloses that said communication service identification comprises at least one address range in said at least one second processing module (s), wherein said at least one address range is mapped to at least one connection based on a set of connection properties (See Pages 3-4 Sections 2.2.1 and 2.2.2 of Dielissen and Pages 290-291 and Figure 7 of Radulescu).

12. In reference to Claim 5, *Æthereal* discloses the limitations as applied to Claim 3 above. *Æthereal* further discloses that said communication service identification further comprises at least one address range in said at least one second processing module (S) (See Pages 3-4 Sections 2.2.1 and 2.2.2 of Dielissen and Pages 290-291 and Figure 7 of Radulescu).

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13. Claims 6 and 7 recite limitations which are substantially similar to those of Claim 1 and are rejected under the same reasoning.

### ***Conclusion***

14. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: "Kees Goossens's Publications Page", which discloses the publication date of Dielissen as November 2003 (See Item 55 on Page 19), which is over one year prior to the US filing date; "Trade Offs in the Design of a Router with Both Guaranteed and Best-Effort Services for Networks on Chip" by Rijpkema et al.; "An Efficient On-Chip NI Offering Guaranteed Services, Shared-Memory Abstraction, and Flexible Network Configuration" by Radulescu et al.; "Bringing Communication Networks on a Chip: Test and Verification Implications" by Vermeulen et al.; "An Event-Based Network-on-Chip Monitoring Service" by Ciordas et al.; US Patent Application Publication Number 2005/0203988 to Nollet et al.; WIPO Publication Number WO 2004/034590 to Radulescu et al.; and US Patent Application Publication Number 2005/0202835 to Sato et al.

15. This Office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Cleary whose telephone number is (571)272-3624. The examiner can normally be reached on Monday-Thursday (7-3).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas J. Cleary/  
Patent Examiner, Art Unit 2111